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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KEITH E. KROPF and ANDREW E. KROPF

Appeal 2008-5926
Application 10/777,251
Technology Center 3700

Decided:¹ March 3, 2009

Before DONALD E. ADAMS, DEMETRA J. MILLS, and
JEFFREY N. FREDMAN, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

disposable diapers and methods of using diapers. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

Statement of the Case

Background

“A majority of parents now use disposable diapers on their children, contending that disposable diapers not only provide greater convenience, but perform better and keep their babies dryer than traditional cloth diapers” (Spec. 1, ll. 13-17). The Specification notes that “the problem still remains of what to do with a soiled disposable diaper following use” (Spec. 1, ll. 22-23).

The Claims

Claims 1-11 are on appeal. We will focus on claims 1, 6, and 7, which are representative and read as follows:

1. A disposable diaper comprising:
a diaper body having an outer surface;
a first layer secured to the diaper body;
a second layer having an interior surface secured to the diaper body to form a pocket between the first and second layer; and
a means for sealing the pocket for containing waste and odor on an exterior surface of the second layer.
6. A method for disposing of a diaper, comprising the steps of:
providing a diaper body having an outer surface
pocket formed on the outer surface of the diaper body;
rolling the diaper body inwardly toward the pocket;
inverting the pocket to receive the diaper body; and
sealing the pocket to enclose the diaper body to form an airtight seal.

7. A disposable diaper comprising:
a diaper body having an outer surface; a layer secured to the diaper body to form a pocket between the layer and the outer surface; and
a means for sealing the pocket for containing waste and odor such that when the pocket is inverted the means for sealing forms an airtight seal.

The prior art

The Examiner relies on the following prior art references to show unpatentability:

Ives	US 6,454,748 B1	Sep. 24, 2002
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The issues

- A. The Examiner rejected claims 1-8, 10, and 11 under 35 U.S.C. § 102(b) as being anticipated by Ives (Ans. 3-5).
- B. The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as being obvious over Ives (Ans. 5-6).
- A. 35 U.S.C. § 102(b) as being anticipated by Ives

The Examiner finds that Ives teaches

a diaper body (26) having an outer surface (28, 30); a first layer (14) secured to the diaper body (26); a second layer (44) having an interior surface (facing toward diaper body (26)) secured to the diaper body (26) to form a pocket between the first and second layer (14, 44); and a means (52) for sealing the pocket for containing waste and odor on an exterior surface (facing away from diaper body (26)) of the second layer (44)(see figure 3, supra)(col. 4, lines 25-33).

(Ans. 7.) The Examiner also finds that Ives teaches that the “sealing means (52) can be reasonably construed as being on the outer surface of the second

layer (44) as it lies against that surface via intermediate peel strip (56) which prevents sealing (52) means from prematurely adhering to the second layer” (*id.*). The Examiner finds that the “use of a Ziplock ® or an adhesive strip . . . would at least be substantially airtight” (*id.*).

Appellants contend that “Ives does not teach a second layer that is both secured to the diaper body on an interior surface and has a sealing means on an exterior surface” (App. Br. 4). Appellants contend that “[i]nstead Ives teaches a layer 14 that has an interior surface that is secured to the diaper 10 and additionally has a strip 52 of an adhesive on that same interior surface” (*id.*). Appellants contend that “the Ives reference does not teach inverting the pocket such that an airtight seal is formed” (*id.* at 5).

In view of these conflicting positions, we frame the anticipation issues before us as follows:

(1) Did the Examiner err in finding that Ives teaches a disposable diaper comprising a “means for sealing the pocket . . . on an exterior surface of the second layer” as required by claim 1?

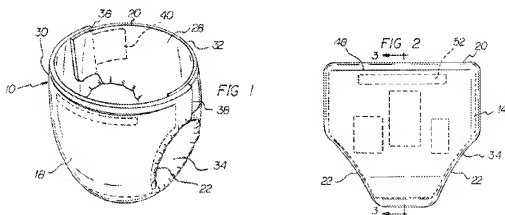
(2) Did the Examiner err in finding that Ives teaches “sealing the pocket to enclose the diaper body to form an airtight seal” as required by claims 6 and 7?

Findings of Fact (FF)

1. Ives teaches a diaper which has “an exterior layer **14** of a liquid impervious plastic material . . . [t]he diaper also has an interior layer **26** of a liquid absorbing material . . . [t]he diaper further comprises an intermediate layer **44** of a liquid impervious plastic material” (Ives, col. 4, ll. 8-26).

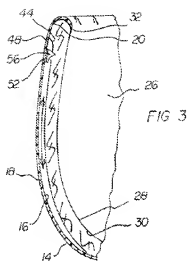
2. Ives teaches that the intermediate layer “is located exterior of the interior layer and coupled at the periphery to the interior face of the exterior layer . . . [t]he intermediate layer thus forms a large pocket” (Ives, col. 4, ll. 27-32).

3. Ives teaches the diaper with pocket in figures 1 and 2, reproduced below:



“FIG. 1 is a perspective view . . . of the diaper with a pocket . . . FIG. 2 is a rear elevational view of the diaper” (Ives, col. 3, ll. 44-48).

4. Ives teaches the structure of the layers in figure 3, reproduced below:



“FIG. 3 is a cross-sectional view taken along line 3-3 of FIG. 2” (Ives, col. 3, ll. 50-51).

5. Ives teaches that “the diaper has a strip 52 of an adhesive on the interior surface of the exterior layer. Such adhesive strip is located immediately beneath the slit” (Ives, col. 4, ll. 40-42).

6. Ives teaches that “[i]n place of the adhesive, there could also be utilized ZIPLOC strips or a pile-type fastener such as VELCRO fasteners” (Ives, col. 4, ll. 45-47).

7. Ives teaches a method in which the “pocket has been situated on the diaper in a manner that allows it to be rolled and turned into the bag or pouch for easy disposal, somewhat like rolling a pair of socks” (Ives, col. 4, ll. 56-58).

8. Ives teaches that “a double sided ZIPLOC strip directly on the pocket would also be helpful in . . . sealing in odor and mess; and (c) VELCRO fasteners and glue could be provided as an option to seal it” (Ives, col. 4, ll. 64-67).

9. The Specification states that “seals 28 and 30 may be airtight interlocking closures, such as ‘ziplock’ type seals” (Spec. 6, ll. 3-4).

Principles of Law

“A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.” *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994); *see Karsten Mfg Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001) (“Invalidity on the ground of ‘anticipation’ requires lack of novelty of the invention as claimed ... that is, all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim.”).

Claim terms are interpreted using the broadest reasonable interpretation in light of the Specification. *See, e.g., In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) (“[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification.”). *Also see In re Morris*, 127 F.3d 1048, 1054-56 (Fed. Cir. 1997). (“Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO’s definition unreasonable when the PTO can point to other sources that support its interpretation.”).

However, in construing a means-plus-function claim limitation in accordance with 35 U.S.C. § 112, ¶ 6, one first identifies the function of the limitation and then looks to the Specification and identifies the corresponding structure for that function. *Med. Instrumentation and Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003).

Analysis

Claim 1

Ives teaches elements of claim 1 including a disposable diaper comprising an outer surface, a first layer secured to the diaper body, a second layer with an interior surface to form a pocket between the first and second layer (FF 1-4).

The final element of claim 1 is a “means for sealing the pocket . . . on an exterior surface of the second layer.” Since this is a “means” element, with the function of “sealing,” we find the corresponding structure which is disclosed in pages 4-6 of the Specification. The Specification teaches that “[m]ain seal 30 is attached to the exterior or first surface 17 of layer 16 . . . main seal 30 is a tape strip or similar adhesive type seal. In addition, main seal 30 may include a protective facing 33” (Spec. 4, l. 27 to 5, l. 2). The Specification also teaches that “[a]lternatively, seals 28 and 30 may be airtight interlocking closures, such as ‘ziplock’ type seals” (Spec. 6, ll. 3-4).

Ives teaches seals including adhesive strips and ziplock type seals (FF 5, 6, 8). However, Ives expressly teaches placement of “strip **52** of an adhesive on the *interior* surface of the exterior layer. Such adhesive strip is located immediately beneath the slit” (Ives, col. 4, ll. 40-42; FF 5; emphasis added). Ives does not teach placement of an adhesive, Velcro, or Ziplock seal “on an exterior surface of the second layer” as required by claim 1.

Since the instant rejection is an “anticipation” rejection, which requires that every limitation be found in Ives, we agree with Appellants that “Ives does not teach a second layer that . . . has a sealing means on an *exterior* surface” (App. Br. 4; emphasis added).

We are not persuaded by the Examiner's argument that the "sealing means (52) can be reasonably construed as being on the outer surface of the second layer (44) as it lies against that surface via intermediate peel strip (56) which prevents sealing (52) means from prematurely adhering to the second layer" (Ans. 7). The Examiner's construction of the sealing means of the Ives reference is unreasonable. The only way that the adhesive strip 52 is on the outer surface of layer 44 is when the pocket is closed, where the strip 52 will be adjacent to layer 44. Further, layer 44 of Ives clearly represents the "first" layer required by claim 1, with layer 14 of Ives representing the "second" layer, where 18 is the exterior surface of layer 14, since Ives forms the pocket between layer 44 and layer 14, not between layer 44 and layer 26 (FF 1-4). So even if the adjacency of strip 52 to layer 44 was interpreted as putting the strip "on" layer 44, that would still be the exterior of the wrong layer, since layer 44 is the "first" layer, not the "second" layer as required by claim 1.

The rejection of claim 1 is reversed. Claims 2-5, 8, 10 and 11 fall with claim 1.

Claims 6 and 7

Ives teaches a method as in claim 6 of disposing of a diaper by providing a diaper body with an outer surface pocket where the diaper is rolled into the pocket which is inverted to receive the diaper, where the pocket is then sealed (FF 1-4, 7, 8).

Ives also teaches elements of claim 7 including a disposable diaper comprising an outer surface, a first layer secured to the diaper body, a

second layer with an interior surface to form a pocket between the first and second layer and a means for sealing the pocket (FF 1-8).

Claims 6 and 7 do not include the limitation found in claim 1 requiring a “means for sealing the pocket . . . on an exterior surface of the second layer.”

We are not persuaded by Appellants’ argument that “Ives reference does not teach inverting the pocket such that an airtight seal is formed” (App. Br. 5). Ives clearly teaches inverting a pocket (FF 7). Ives also teaches that the use of a “double sided ZIPLOC strip directly on the pocket would also be helpful in . . . sealing in odor and mess” (Ives, col. 4, ll. 64-67; FF 8). It is clear that the ziploc strip is airtight, since Appellants’ Specification states that “seals 28 and 30 may be airtight interlocking closures, such as ‘ziplock’ type seals” (Spec. 6, ll. 3-4; FF 9).

We also do not find persuasive Appellants’ argument that “at the very ends of the elongated slip 48 of Ives . . . an air tight seal cannot be formed as Applicant asserts that Ives does not teach sealing at this very corner spot wherein odor is released” (App. Br. 6). Appellants’ reliance on figure 4 of Ives is misplaced, since figure 4 of Ives shows an adhesive strip, not a ziploc strip (*see* Ives, col. 3, ll. 52-53). When Ives discusses the use of a ziploc closure, Ives teaches that it is placed “directly on the pocket” (Ives, col. 4, l. 64). Further, Ives expressly teaches that the seal will function in “sealing in odor” (Ives, col. 4, ll. 65-66). Ives is reasonably interpreted as teaching rolling the entire odor containing portion of the diaper into the pocket, where the closed ziploc strips will form an airtight seal, “sealing in odor and mess” (Ives, col. 4, ll. 65-66; FF 7-9).

The rejection of claims 6-7 is affirmed.

Conclusions of Law

(1) The Examiner erred in finding that Ives teaches a disposable diaper comprising a “means for sealing the pocket . . . on an exterior surface of the second layer” as required by claim 1.

(2) The Examiner did not err in finding that Ives teaches “sealing the pocket to enclose the diaper body to form an airtight seal” as required by claims 6 and 7.

B. 35 U.S.C. § 103(a) over Ives

The Examiner rejected claim 9 under 35 U.S.C. § 103(a) as obvious over Ives (Ans. 5-6).

Claim 9 depends from claim 7. As we did not find error in the rejection of claim 7 over Ives under 35 U.S.C. § 102(b), and Appellants do not identify how Ives fails to teach the dependent claim limitations, we also find no error in the rejection of claim 9 as well. The rejection of claim 9 is affirmed.

SUMMARY

In summary, we reverse the rejection of claims 1-5 under 35 U.S.C. § 102(b) as being anticipated by Ives. We affirm the rejection of claims 6 and 7 under 35 U.S.C. § 102(b) as being anticipated by Ives. Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we also affirm the rejection of claims 8, 10, and 11 as these claims were not argued separately. We also affirm the rejection of claim 9 under 35 U.S.C. § 103(a) as obvious over Ives.

AFFIRMED-IN-PART

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